

**To:** Amy Brackin[abrackin@libertytire.com]  
**Cc:** Janjic, Ksenija[Janjic.Ksenija@epa.gov]  
**From:** Carusiello, Chris  
**Sent:** Tue 11/8/2016 1:39:20 PM  
**Subject:** RE: Quick Call on Synthetic Turf

Hi Amy,

Thank you for sending this information. Would 9 or 9:30am work for the call?

Thank you,

Chris Carusiello

**From:** Amy Brackin [mailto:abrackin@libertytire.com]  
**Sent:** Tuesday, November 08, 2016 8:02 AM  
**To:** Carusiello, Chris <Carusiello.Chris@epa.gov>  
**Cc:** Janjic, Ksenija <Janjic.Ksenija@epa.gov>  
**Subject:** RE: Quick Call on Synthetic Turf

FYI - I know this was one of your questions per Ksenija's call.

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### **Tufted vs Woven**

In a tufted synthetic turf product the face yarns (typically green) are needled into a primary backing fabric or textile.

The tufted products are limited on the number of filaments per tuft. The needle used in tufted synthetic turf products have limitations on how many filaments can be used (punched through and stitched/tufted through the primary backing) at one time. Typically the maximum number of filaments that can be used at one time in a tufted synthetic turf system is eight (8). With tufted turf products different fiber heights are not possible and the tufted products are also limited on how dense the face weights can be.

A woven turf system has enhanced tuft bind (zero fiber loss), up to 40 different filaments can be used per bundle vs the 8 filaments in a tufted product. A woven turf also allows for the final turf product to have various fiber lengths and much higher density vs. tufted products with up to 60,000 denier products.

Amy Brackin

Liberty Tire Recycling

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*“One right and honest definition of business is mutual helpfulness.”*

– William Feather

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**From:** Carusiello, Chris [<mailto:Carusiello.Chris@epa.gov>]

**Sent:** Thursday, November 03, 2016 5:13 PM

**To:** Amy Brackin <[abrackin@libertytire.com](mailto:abrackin@libertytire.com)>

**Cc:** Janjic, Ksenija <[Janjic.Ksenija@epa.gov](mailto:Janjic.Ksenija@epa.gov)>

**Subject:** Quick Call on Synthetic Turf

Hi Amy,

Thanks for getting back to us today. I just called and left a voicemail on your machine. Would it be possible to have a 10-minute call Tuesday morning sometime between 8-10am?

Thank you,

Chris Carusiello

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Chris Carusiello

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